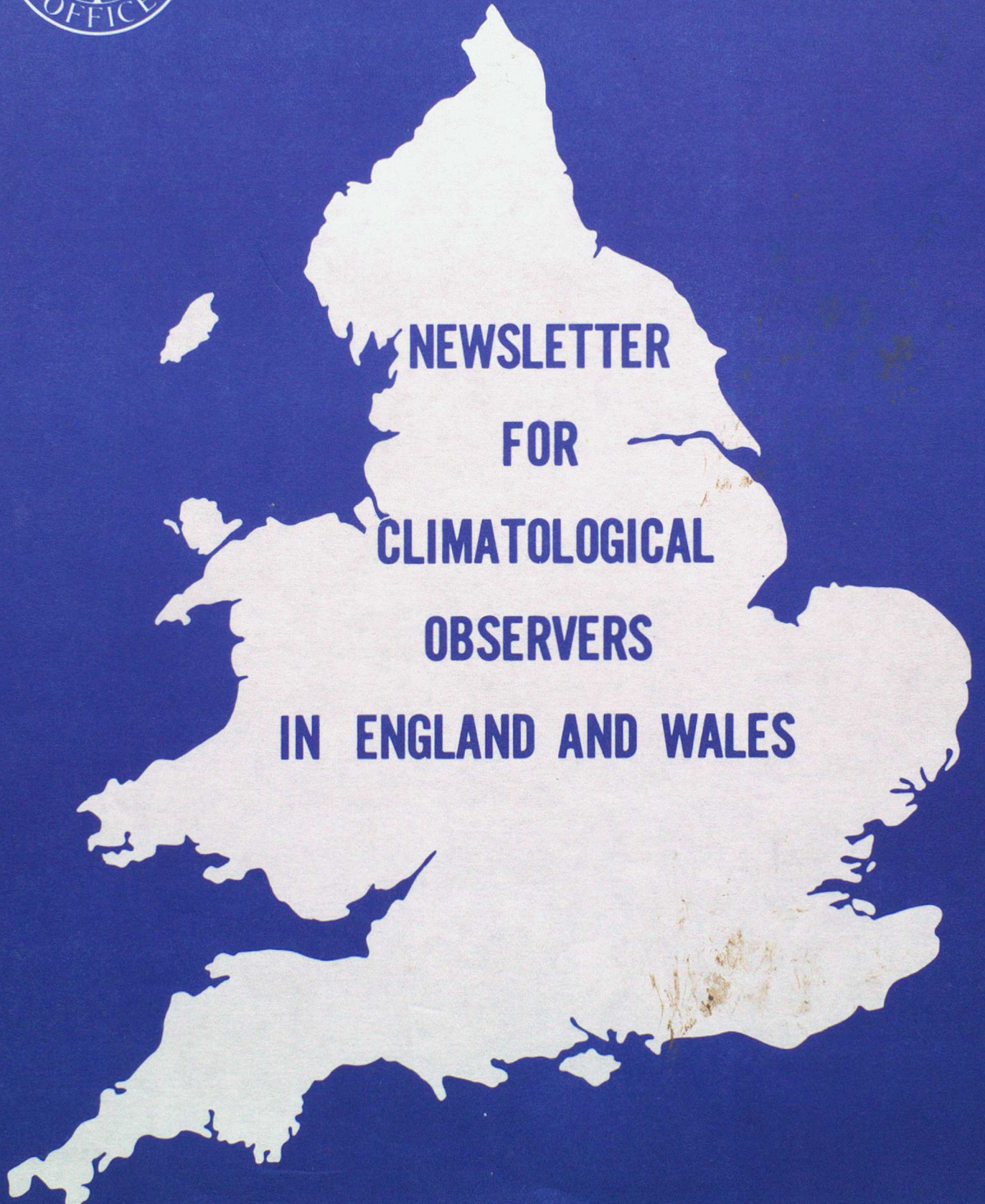




METEOROLOGICAL OFFICE

A large, white silhouette of the map of Great Britain is centered on the page. The text of the newsletter title is printed in dark blue capital letters over the map.

**NEWSLETTER
FOR
CLIMATOLOGICAL
OBSERVERS
IN ENGLAND AND WALES**

METEOROLOGICAL OFFICE
NEWSLETTER
FOR
CLIMATOLOGICAL OBSERVERS
NO 17
JANUARY 1988

Produced by:

Met 0 1
Observational Requirements and Practices Branch
Eastern Road
Bracknell
Berkshire
RG12 2UR

OBSERVERS NEWSLETTER - 17th Edition

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EDITORIAL

Another year seems to have flown by so its my pleasure once again to welcome you to the 17th edition of the Climatological Observers Newsletter. I hope you all had an enjoyable Christmas and trust that 1988 will be a good year for you all.

I would also like to take this opportunity to thank everyone for their valued contribution in 1987 to the climatological records of the UK. Your co-operation and dedication over the past 12 months is, as always, greatly appreciated by all those who are involved with the voluntary climatological network here at Bracknell.

During the year several changes have been introduced to the administration of the Climatological network. The current award scheme has been expanded (see page 5 for details of this years awards) and a letter will be sent to yourselves in the Spring of each year giving you up to date information about observing and coding etc. This new letter will replace the formal letter issued by the Director-General during the Autumn. Some of you may have already noticed that this letter was missing from your annual issue of forms and stationery which you received in September. I hope these changes will meet with your approval.

Finally I would like to extend a warm welcome to all those new stations that have joined or who are in the process of joining the co-operating climatological network. I hope you will enjoy reading through your first Newsletter and look forward perhaps to hearing from you in future editions. We are always pleased to include letters in the Newsletter from our observers. You might like to write about problems you've encountered and maybe solved since you started observing. Or maybe you would just like to make contact with fellow observers in your area. Whatever the subject we would be pleased to hear from you.

J Gloster

STOP PRESS

It was with great pleasure that we learnt Mr J C W Day, the observer at Walsall, had been awarded the British Empire Medal in the New Years Honours List.

NEWS OF STATIONS

STATIONS WHICH HAVE CLOSED

FORDEN (Powys) - The climatological station run by Mr E G Carswell closed in March 1987 due to the observer moving house. We are hoping that Mr Carswell will be able to recommence recordings at his new address in the not too distant future.

HARROW WEALD (Middlesex) - Due to vandalism problems the climatological station at the Harrow Weald Cemetery closed in September 1987. The station will however continue to report rainfall, assuming of course the raingauge is left undisturbed.

BIRMINGHAM KING EDWARD'S SCHOOL (West Midlands) - After over 28 years of co-operation the climat station at King Edward's School has closed. The site on which the weather station stood was required for a new Arts and Crafts building and unfortunately no alternative site could be found.

We are sorry to have lost the 3 stations mentioned above but are grateful to all those concerned for their past co-operation.

NEW STATIONS

It is with great pleasure that I welcome 13 new stations into the voluntary climatological network. I look forward to many years of mutual co-operation between us.

RETTENDON (Essex) - A new station at Rettendon was opened by Mr R R O' Sullivan in December 1986. This replaces Mr Sullivan's former station at Rayleigh, approx 3 miles to the south.

HALESOWEN (West Midlands) - In March 1987 observations commenced from this new station which has been set up by Mr C G Roberts. However, Mr Roberts is not a new observer as he has been making weather observations for over thirty years. In fact this is the second time Mr Roberts has joined the voluntary network the first period being between 1956-67 at a site very close to his latest station. We welcome Mr Roberts return to the network and look forward to another successful association.

LLANYMAWDDWY (Gwynedd) - This station opened in April 1987 and is run by Mr A J Hughes. The exposure of this station is unusual in that it is situated on a steep-sided valley. However, because of the dearth of stations in this area we were very pleased to accept this station into the network.

MYERSCOUGH (Lancashire) - A new Agro-Met station at the Lancashire College of Agriculture and Horticulture at Bilsborrow near Preston opened in April 1987. This was previously a rainfall only station with records dating back to 1970.

PENCELLI (Powys) - In July 1987 observations began from a climatological station at the Pencelli Outdoor Education Centre near Brecon.

NORTHWOOD (Middlesex) - Another station to open in July was the climatological station at Northwood, run by Mr C Allen and situated in the grounds of St Helen's School.

BRESSINGHAM (Norfolk) - Climatological observations commenced from this station in September 1987 although rainfall records date back to 1977. The station is set up in a nursery owned by Blooms of Bressingham.

SITTINGBOURNE (Kent) - Since September 1987 data from an Automatic Weather Station at the Shell Research Centre, Sittingbourne have been forwarded to Bracknell for evaluation.

LUDLLOW (Shropshire) - A climatological station has been set up in the grounds of Ludlow College. Observations commenced from 1 January 1988.

FLAT HOLM - A climatological station has been set up on this small island in the Bristol Channel, now designated as a local Nature Reserve. The station has been established with the co-operation of the Flat Holm Project whose role is to maintain and improve the ecology of the island. Observations commenced in January 1988.

PRESTEIGNE (Powys) - A climatological station has been established by Mr G. A. Southern at his home at Ackhill near Presteigne on the eastern edge of Powys. Mr Southern will begin official co-operation from 1 January 1988.

HUNSTANTON (Norfolk) - Another new station to begin in January was the Health Resort Station at Hunstanton which has been set up by the Borough Council of King's Lynn and West Norfolk.

CARMARTHEN (Dyfed) - Following the closure of the Agro-Met station at Carmarthen in December 1985 we are pleased to welcome a new station which is being set up in the grounds of the Carmarthen Museum. The Museum is situated on the outskirts of Abergwili two miles east of Carmarthen. Observations will commence on 1 February 1988.

The following 5 stations have all been accepted into the climatological network and are currently being set up. Hopefully all these stations will be operating early in 1988.

LOWER WILLINGDON (East Sussex) - A climatological station is being established at the Willingdon County Primary School by Mr G S Wrapson.

SLIMBRIDGE (Gloucester) - A climatological station is being set up at the Wildfowl Trust, Slimbridge.

RHANDIRMWYN (Dyfed) - This new station will be situated on the RSPB Gwenffrwd Reserve approximately 10 miles north of Llandovery.

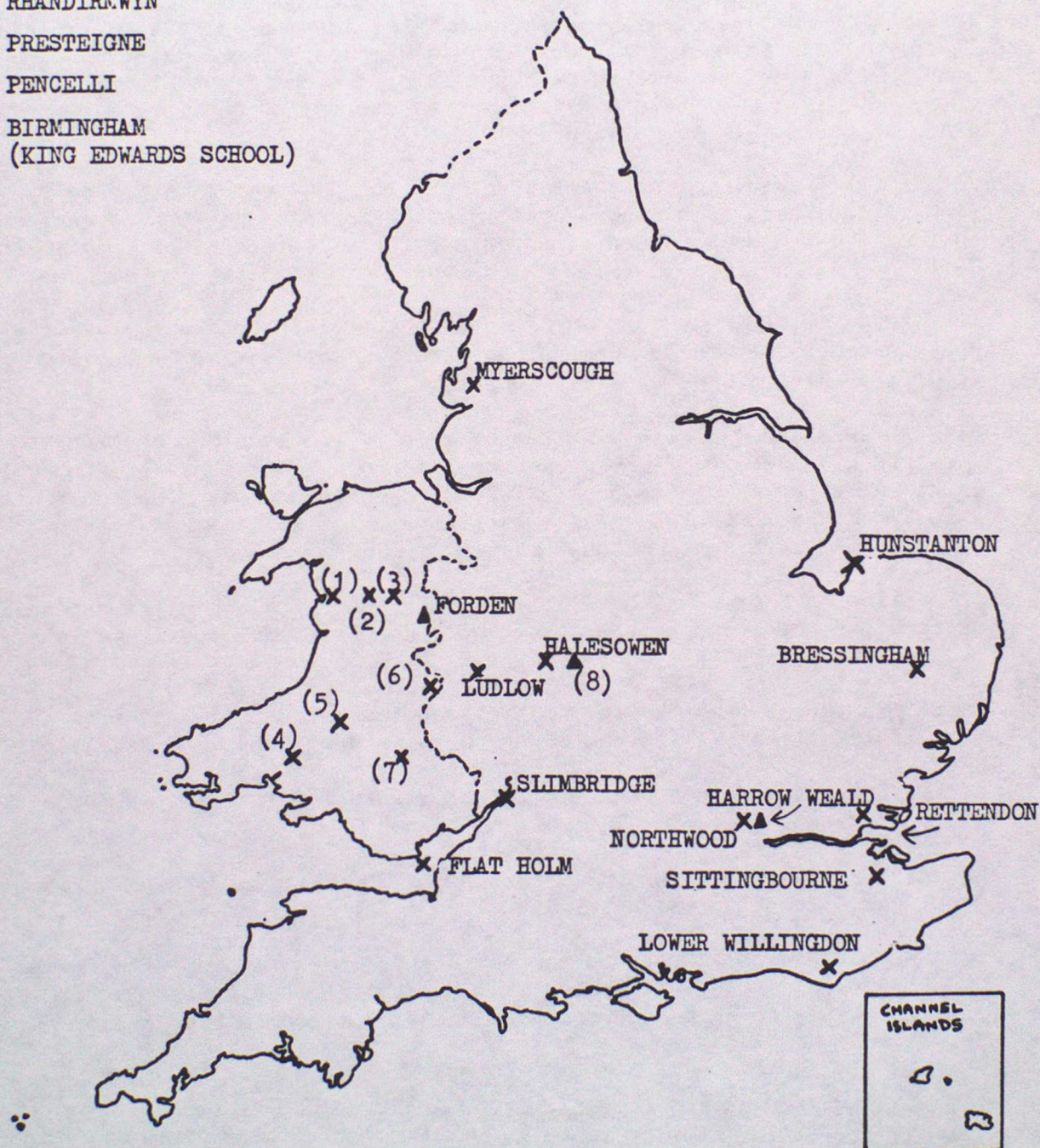
ISLAWDREF (Gwynedd) - This is another station being set up with the help of the RSPB (Coed Garth Gell Reserve). The station itself is being set up on land belonging to Mr V Davies approximately 3 miles to the west of Dolgellau.

LAKE VYRNWY (Powys) - A combined Synoptic Automatic Weather Station (SAWS) and climatological station is being constructed at Lake Vyrnwy at the northern edge of Powys, approximately 1 mile southwest of the small village at Llanwddyn. The weather station is being set up on land belonging to the Welsh Water Authority and the observer and SAWS caretaker will be Mr M Walker the RSPB Warden at the Lake Vyrnwy Reserve.

THE MAP BELOW SHOWS THE STATIONS WHICH HAVE OPENED OR CLOSED SINCE THE LAST
NEWSLETTER WAS ISSUED

Key to numbered stations

- (1) = ISLAWDREF
- (2) = LLANYMAWDDWY
- (3) = LAKE VYRNWY
- (4) = CARMARTHEN
- (5) = RHANDIRN WYN
- (6) = PRESTEIGNE
- (7) = PENCELLI
- (8) = BIRMINGHAM
(KING EDWARDS SCHOOL)



X = Stations opened or planned

▲ = Stations closed

AWARDS TO OBSERVERS IN 1987

Congratulations to all those observers listed below who have received an award this year for their contribution in the Voluntary Climatological Network. A long period of observations from a station is invaluable in helping us understand the complexities of our climate. The contribution by the observers listed below to the climatological records of this country is a notable achievement for which the Meteorological Office is indebted.

The following 12 observers have all been observing for at least 25 years and have consistently maintained high standards in their meteorological routine during this period. They therefore qualify for the new long service award which has just been introduced.

OBSERVER	STATION	PERIOD
MR E.T. CLUGSTONE	ELMSTONE (KENT)	1958-1987
MR K.W. BRYAR	FALMOUTH (CORNWALL)	1960-1987
MR P.J. POWER	FOLKESTONE (KENT)	1961-1987
MR J.W. PHILIPS	GOUDHURST (KENT)	1961-1987
MR B.J. FIRMIN	HALSTEAD (ESSEX)	1960-1987
MR H.H. HUNTER	HAYDON BRIDGE (NORTHUMBERLAND)	1960-1987
MR R. BOWLES	KNUTSFORD (CHESHIRE)	1960-1987
MR C.H. WHITE	LONG SUTTON (HANTS)	1960-1987
MR E.A. BONSER	NEWTOWN LINFORD (LEICS)	1958-1987
MR J.S. POWELL	PENMAEN (W. GLAMORGAN)	1961-1987
MR W.C. HUNT	TERRINGTON ST CLEMENT (NORFOLK)	1961-1987
MR G.D. POPE	WOBURN (BEDS)	1958-1987

The five observers listed below have each received a book award in recognition of the high quality of meteorological observations they have provided over the last 15 years.

MR S. BROOMHEAD — ASKHAM BRYAN (N. YORKS)
 MR F.W. FORD — CHELTENHAM (GLOUS)
 MR R. BROWN — LATHOM PARK (LANCS)
 MR R.K. MOORE — SWANAGE (DORSET)
 MR W.P. WALLACE — WHITBY (N. YORKS)

The first recipients of an award introduced this year to the ten stations who have provided the best climat returns over the year are listed below. Congratulations to those and also to the large number of stations that were also in contention. If your station is not selected for this award please don't think that your data is any less important. I can assure you that we value the data from all our co-operating stations. The ten winners of this new award this year are:-

MISS L HAYDON — ALICE HOLT LODGE (SURREY)
 MR M.G.J. PIZZEY — CAVENDISH (SUFFOLK)
 MR S.W. JACKSON — COVENTRY SCHOOL, BABLAKE (W. MIDLANDS)
 MR M.F. WICKENDEN — EAST MALLING (KENT)
 MR M. BEADLE — HAZELRIGG (LANCS)
 MR M.W. HUXLEY — LONG ASHTON (AVON)
 MR J.S. POWELL — PENMAEN (GLAMORGAN)
 MR K SPIERS — READING UNIVERSITY (BERKS)
 MISS G. BOON — SHEFFIELD WESTON PARK (S YORKS)
 MR J D GOODGER — VELINDRE (POWYS)

THE CO-OPERATING OBSERVERS' COURSE

The Co-operating Observers' Course is held at the Meteorological Office College at 'Shinfield Park' near Reading in Berkshire. This is a one week course designed to train non-professional observers to make and code weather observations to the standard required for these to be included in the national climatological records.

The course is for all observers making climatological reports or reports from agrometeorological stations. Observers from these different backgrounds are placed on separate courses wherever possible.

The course is very friendly and informal and the emphasis is on the practical aspects of observing. There are no examinations of any kind, but the instructors will be hoping to improve the observing skill of even the most experienced members of the course. Time can always be found to help you with any problems that you may have.

Shinfield Park is a residential college set in large wooded grounds, and most students greatly enjoy their stay there. The college club has a comfortable bar and provides many facilities such as television, snooker and bar billiards etc. The study - bedrooms are very comfortable and provide private relaxation when required.

The costs of this course and travelling expenses to and from the College are paid by the Meteorological Office.

You will certainly gain a lot by attending this course and we look forward to seeing you at the college.

D. Richardson

Senior Instructor

Meteorological Office College

CO-OPERATING OBSERVER COURSES IN 1988

CO 2. 29 Feb - 4 March
CO 3. 27 June - 1 July
CO 4. 11 July - 15 July
CO 1. 5 Sept - 9 Sept

Royal Meteorological Society Field Study Courses on Weather

COURSES IN 1988

Weather Under Sail 30 April-6 May 1988 £206.50

Directed by Mr. Richard Ebling, Cardiff Weather Centre

Run in conjunction with the Island Cruising Club

Sailing from Salcombe in Devon the course takes place aboard the Club's 86ft classic Edwardian schooner which has berths for 8 plus Course leader, Skipper and Mate, not forgetting a full-time cook. The destination will be the waters of the English Channel and you will learn not only about meteorology afloat but also about sailing a gaff rigged schooner, from measuring weather elements to influencing the ship's course on the basis of your forecast.

Mountain Weather 5-12 August 1988 £155

Drapers' Field Centre, Betws-y-Coed, Gwynedd

Directed by Mr. Terry Spalding and Mr. Rodney Blackall, Meteorological Office

This is a course for all who like to roam in the hills. It consists of some lectures, do-it-yourself forecasting and field work amidst the beautiful scenery of Snowdonia.

Understanding Weather 5-12 August 1988 £155

Malham Tarn Field Centre, Yorkshire

Directed by Dr. Keith Weston, University of Edinburgh and

Dr. David Warren, British Antarctic Survey

A course in which you are immersed in the weather and all things meteorological in the beautiful surroundings 1300ft up in the Yorkshire Dales. A full week's programme of talks, outdoor work and films includes learning about weather satellites, a forecasting competition and the launching and tracking of hydrogen-filled balloons. Useful for GCSE teachers and students.

Weather Science and Weather Forecasting 24-31 August 1988 £160

The Leonard Wills Field Centre, Nettlecombe Court, Somerset

Directed by Dr. Bob Riddaway, Meteorological Office and

Dr. Geoff Jenkins, Department of the Environment

Would you enjoy learning how to understand weather charts and make your own local forecast? – to track weather balloons, to measure high altitude winds? – and to be involved in lots of other weather activities, all in the informal atmosphere of a beautiful old country house in the Exmoor National Park? Then this is for you. Useful for GCSE teachers and students.

Weather and Bird Migration 11-16 September 1988 £95

Gibraltar Point Field Station, Skegness, Lincolnshire

Directed by Mr. Malcolm Walker, University of Wales Institute of Science and Technology

and Dr. Al Venables, University College, Cardiff.

This course is intended for bird-watchers who wish to study the ways in which migrations, populations and flight patterns of birds depend upon weather and climate. Much of each day is spent in the field; and the aim is chiefly to relate the species seen, and their numbers, to the current weather situation.

Forecasting the New Year Weather 29 December 1988-3 January 1989 £135

The Leonard Wills Field Centre, Nettlecombe Court, Somerset

Directed by Dr. Bob Riddaway, Meteorological Office and

Dr. Geoff Jenkins, Department of the Environment

This is a condensed version of the week-long summer course by the same instructors, but with the same mixture of basic meteorology, forecasting and outdoor activities – weather permitting!

Weekend Courses:

Understanding Mountain Weather 4-5 June and 25-26 June 1988

Directed by Mr. D. J. George, Meteorological Office, in conjunction with the Sports Council

Weekend courses for those who go into the mountains for work or leisure, including leaders of parties and those working towards Mountain Leadership qualifications, Duke of Edinburgh awards, and GCSE Meteorology. Includes one field trip and informal lectures.

Bookings (including deposit of £30, deducted from course fee of £75) to:

National Centre of Mountain Activities, Plas-y-Brenin, Capel Curig, Gwynedd.

For further details of the above courses, please write, stating your specific interest to:

The Executive Secretary, Royal Meteorological Society, James Glaisher House, Grenville Place, Bracknell, Berkshire RG12 1BX

The following article is an extract taken from 'Notes on Weather Observing' produced by the Met Office at Edinburgh.

0900 CLOUD cover

Perhaps the easiest of the estimated values - and the first item in the observation register.

Imagine that all the cloud in the sky irrespective of type or height is gathered together and then simply estimate the fraction of the sky which is cloud covered.



0 = no cloud

1 = $\frac{1}{8}$ of the sky covered

2 = $\frac{1}{4}$ " " " "

3 = $\frac{3}{8}$ " " " "

4 = $\frac{1}{2}$ " " " "

5 = $\frac{5}{8}$ " " " "

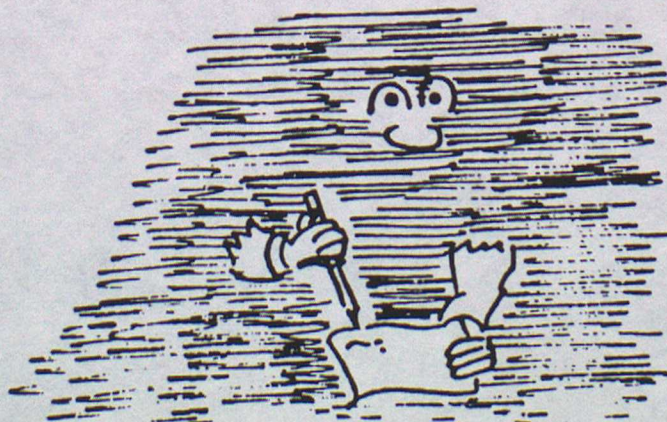
6 = $\frac{3}{4}$ " " " "

7 = $\frac{7}{8}$ " " " "

8 = complete cloud cover



The code figure 9 is used when the sky is obscured by fog, falling snow or heavy rain.



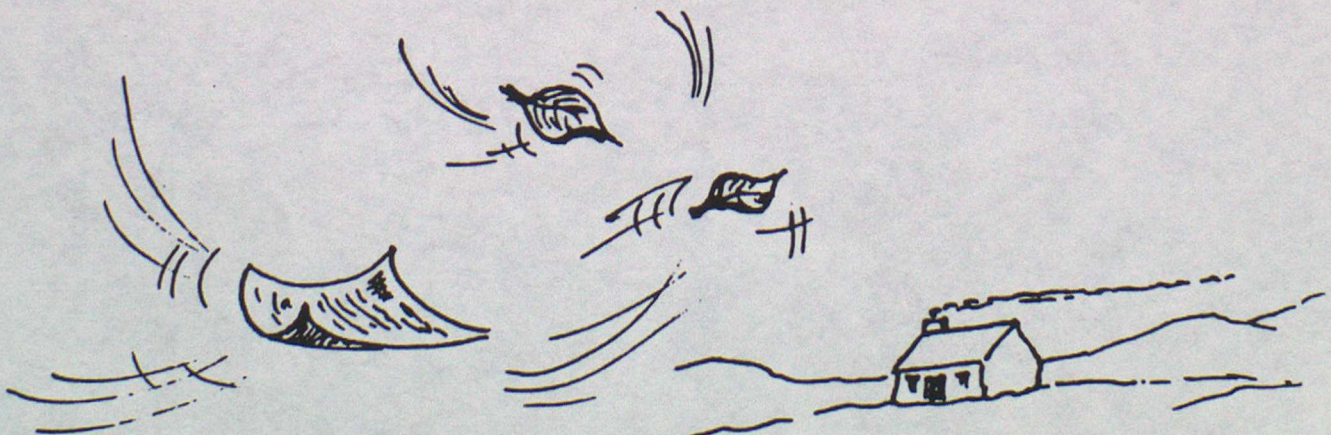
0900 WIND speed
and direction

Another estimated value. By using the descriptions given on pages 12 and 13 of the instructions inside the observation register, most people can estimate the speed of the wind to the nearest Beaufort Force and the Direction to the nearest Sector - perfectly adequate to give us a very useful picture of the wind flow.

For those interested in such things, the codes referred to in the instructions are not simply numbers, the speed code is the average wind speed for that Beaufort Force, whilst the direction is the compass direction from which the wind is blowing i.e. south = 18 = 180°.

Those whose weather station site is sheltered have some problems. It is more useful to us to know the general wind flow in the area, so an estimate made on the way to work may be the answer. Using the motion of clouds can be misleading as they can vary in height from a few hundred to many thousands of feet above the earth and the wind speed and direction at those heights may be completely different from that at ground level.

The only other point to remember is that if the wind is calm then both speed and direction are given as '00'.





Estimation of wind direction

If, at all, possible, the observer should stand in a fairly open space avoiding buildings and trees because even small obstructions may cause quite significant changes in wind direction, particularly on the sheltered side.



In this open space, the observer should face directly into the wind and the direction from which the wind is coming may then be estimated by reference to the known direction of certain landmarks.



In a valley situation, care must be taken not to use the direction in which cloud is being blown since this can often be radically different to the actual surface wind.



Entry of direction into Register and F3208

This is, in tens of degrees, the direction the wind is blowing from at the time of observation.

The entry consists of two figures

i.e. 02 when the wind comes from 020° or NNE

through

09 when wind comes from 090° or EAST

through

18 = 180° or SOUTH

27 = 270° or WEST

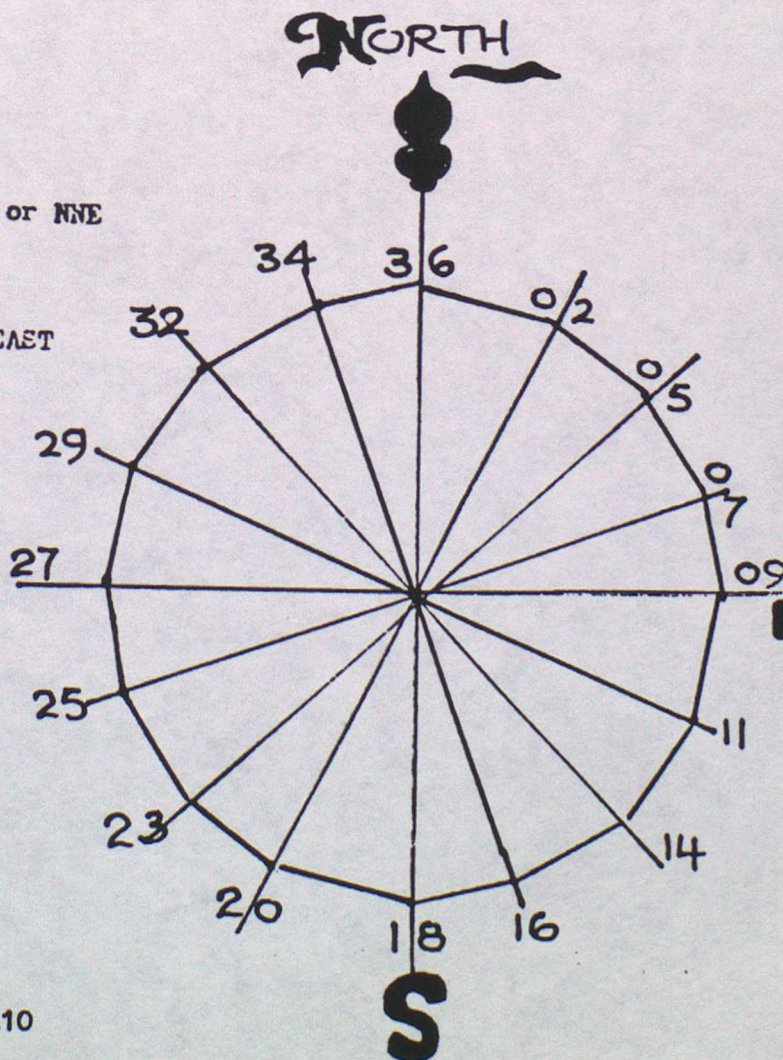
back to

36 = 360° or NORTH

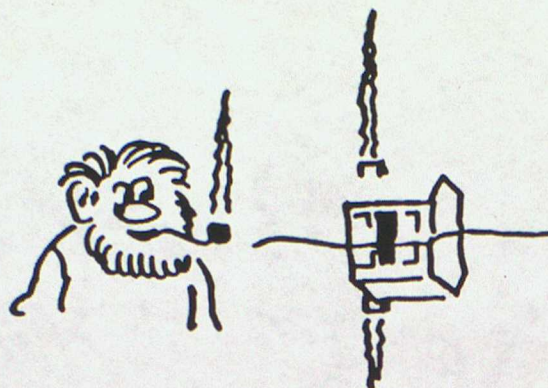
Calm entries for direction

are ALWAYS 00!

W



CALM



SMOKE RISES VERTICALLY
SEA & LOCH LIKE A MIRROR

ALWAYS CODED AS

DIR. SPEED	
0	0
0	0

NEVER GIVEN DIRECTION!

FORCE **1**

02 knots



LIGHT AIR

WIND DIRECTION SHOWN BY
SMOKE DRIFT.

WATER RIPPLED GENTLY.

FORCE **2**

05 knots



LIGHT BREEZE

WIND FELT ON FACE.
LEAVES RUSTLE.

SMALL WAVELETS ON WATER.

FORCE **3**

09 knots



GENTLE BREEZE

LEAVES AND SMALL TWIGS IN
CONSTANT MOTION.

WIND EXTENDS LIGHT FLAG.

WATER-CRESTS START TO BREAK

FORCE **4**

13 knots



MODERATE BREEZE

RAISES DUST AND LOOSE PAPER.

SMALL BRANCHES MOVED.

SMALL WAVES; white horses
begin to form.

FORCE 5

19 knots

FRESH BREEZE

SMALL TREES AND BUSHES
BEGIN TO SWAY.
LONG MODERATE WAVES: MANY
WHITE HORSES: PERHAPS SOME
SPRAY



FORCE 6

24 knots

STRONG BREEZE

LARGE BRANCHES IN MOTION
DIFFICULTY USING UMBRELLAS
WHISTLING IN TELEPHONE WIRES
LARGE WAVES AND MORE SPRAY

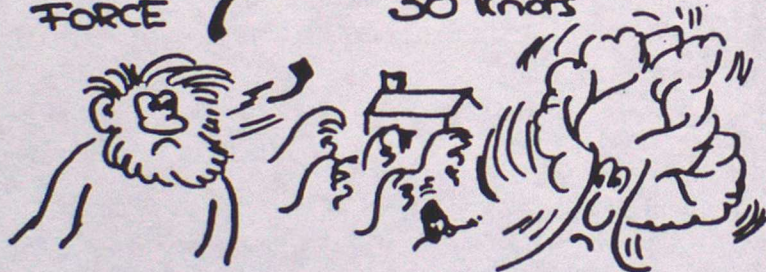


FORCE 7

30 knots

NEAR GALE

WHOLE TREES IN MOTION
DIFFICULT TO WALK AGAINST WIND
WATER HEAPS UP AND FOM BLOWS
ALONG WIND DIRECTION



FORCE 8

37 knots

GALE

BREAKS TWIGS OFF TREES
IMPEDES PROGRESS
HIGHER / LONGER WAVES
WITH MUCH FOM



0900 PRESENT WEATHER

This code is much less complicated than it looks - really it is! At a quick glance, there appears to be 100 different code figures to choose from. A closer inspection reveals that the choice is usually reduced to less than 5.

The main points to remember are:-

1. The code is split up into groups of 10 i.e.

- 00-19 Miscellaneous i.e. nothing important, not raining, drizzling, snowing etc.
- 20-29 Rain, drizzle, snow etc has stopped in the previous hour.
- 30-39 Sand or dust storms. Fairly rare in Scotland.
- 40-49 Fog.
- 50-59 Drizzle.
- 60-69 Rain.
- 70-79 Snow.
- 80-89 Showers.
- 90-99 Thunderstorms.

2. Always use the highest code figure i.e.

If it's raining and foggy use a code between 60 and 65 rather than 40 to 49 or if it is snowing but the sky has remained unchanged throughout use a code figure between 70 and 75 rather than 02.

Further notes

Many of the codes especially in the first 39 are not applicable to once per day observations so if there is no fog or precipitation we won't complain if you stick to:-

- 02 - nothing changing
- 05 - haze
- 10 - mist

however if you feel more adventurous - feel free - some definitions

Intermittent means for less than an hour.

Continuous means for more than an hour.

PRESENT WEATHER CODES

	Drizzle	Rain	Snow	Showers	Thunderstorm	
Slight	50 or 51	60 or 61	70 or 71	<u>Rain</u> 80 <u>Sleet</u> 83 <u>Snow</u> 85	95	Slight
Moderate	52 or 53	62 or 63	72 or 73	81 84 86	96	Moderate
Heavy	54 or 55	64 or 65	74 or 75	81 84 86	97	Heavy
Freezing (uncommon)	56 or 57	66 or 67		1111 89 or 90		
With Rain (fairly common)	58 - 59	With Snow 68-69 (sleet)				

Fog	
Vis Code Fig 4 or more	
Patches	40
Vis Code Fig 3 or less	
Patchy	41
Thinning	42 or 43
No change	44 or 45
Thickening	46 or 47

VANDALISM

How secure is Your Site?

It seems hardly a week has gone by over the last 12 months without one of you ringing in to say your station has been vandalised and your instruments stolen or smashed. No part of the country is safe with similar depressing reports coming in from all over England and Wales.

There is of course a limit to the protection a site can be given but sometimes, unfortunately, no matter what steps are taken, intruders will gain entry. However, if your site is situated in a vulnerable location the following basic precautions may help prevent the chance break-in.

1. Check the condition of the enclosure fencing at regular intervals and have any holes or weak points repaired or strengthened.
2. Fit a good padlock to the enclosure gate and also to the thermometer screen door. If you have a grass and concrete minimum thermometer they can be kept in the thermometer screen for safe keeping after reading at 0900 GMT. The thermometers can then be re-exposed at sunset or earlier if radiation shields are fitted. The rain measure can also be kept in the screen.
3. If you have a sunshine recorder in your enclosure consider putting up a sign to discourage potential vandals. For instance some of our stations have found the following sign quite effective.

DANGER
RADIATION MEASURING
EQUIPMENT

The sunshine recorder does of course measure solar radiation and not the radiation which most people associate the term with.

4. The sunshine recorder is, as you are probably aware, the most expensive and unfortunately the most frequently stolen piece of equipment from climat stations. (The current cost of replacing a Mk 3 Sunshine Recorder is £751 plus VAT.) Sometimes only the sphere is taken (£157 plus VAT) but on other occasions the thieves come prepared and unbolt the complete instrument. If you can't improve the security of your enclosure any further and people are still intent on breaking in, the only alternative is to try and resite the recorder at a less vulnerable location. A roof top site is the obvious solution. Apart from improving the instruments security you will probably also improve its exposure. If you do decide to move your recorder to a roof top site please make sure the roof is safe and also that there is a safe access.

For those of you who have your equipment insured here is a list of current prices for you to check to make sure your cover is adequate.

	£
Thermometer Screen, Ordinary	186.34
Thermometer Stand	42.35
Thermometer Maximum	28.03
Thermometer Minimum	23.55
Thermometer Ordinary	22.62
Thermometer Grass Minimum	27.74
Thermometer 10 cm (Bent Stem)	16.63
Thermometer 20 cm (Bent Stem)	16.39
Thermometer Soil Ordinary (For 30, 50 and 100 cm Soil Tubes)	31.94
Raingauge, 5-inch, Mk 2	119.72
Rainmeasure	10.11
Sunshine Recorder, Frame Mk 3	593.50
Sunshine Recorder, Sphere Mk 3	157.30
Sunshine Recorder, Sphere Mk 2	95.33

Please note the above prices attract VAT which is currently set at 15%.

STORAGE OF PERSONAL INFORMATION ON COMPUTERS

To help us administer the climatological network more efficiently details of stations in England and Wales are currently being put onto our computer at Bracknell. These details will include the exact location of your station, the exposure of the site and the instruments in use. Additionally, for our convenience, the names and addresses of the Authority maintaining the station and the main observer will also be stored.

Under the Data Protection Act we are compelled to register that we hold personal information on our computer. If you wish to see the details we hold on your station please write in to Met O 1e at the address given below.

We would like to stress that on no account will names and addresses of Authorities or Observers be divulged to any outside organisation without prior permission.

Meteorological Office
Met O 1e, Room T11
Eastern Road
Bracknell
Berks
RG12 2UR

THOSE WERE THE DAYS

The order below was discovered by our Rainfall Section in one of their old files. The current cost of the equipment ordered is :-

MK 2, 5 inch Raingauge - £119-72 (Plus VAT & p.p)
Rain Measure, Tapered - £10-11 "
Bottle Quart - £0-42 "

In 1928 the total cost of the order would have been £2-9-7d or in todays money £2-48p. Using todays prices the cost would be £261-76.

PHONE No
MIDLAND 650.

ORDER No. **2527**
WHEN REFERRING TO THIS ORDER PLEASE
QUOTE THIS NUMBER.

From **THE SOUTH STAFFORDSHIRE WATERWORKS COMPANY,**

ENGINEER'S OFFICES: 26A PARADISE STREET,

BIRMINGHAM,

Monday, 15th October, 1928.

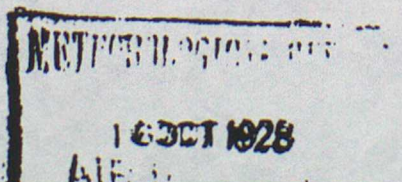
To Meteorological Office,
Air Ministry,
Exhibition Road,
South Kensington,
LONDON. S.W.7.

Please supply the undermentioned:—

W.G.
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P.17

Fred. J. Dixon

LETTERS TO THE EDITOR

Dear Mr Gloster

17 February 1987

Newsletter

I have today received my first copy of your most interesting Newsletter for Climatological Observers (No. 16) and already, like several of your correspondents am sad to see that it has had to reduce its publication rate.

We re-opened the Station at Ross in 1985 but I suppose we were too new to be on the circulation list for the 1985 Newsletter, where presumably some note of our re-opening would have appeared. Are there any copies on the 1985 issue still available please as it would be interesting to have one in our Station records?

The inclusion of our former Mayor, Mr Clark, in your obituary notices will be much appreciated by the observers here and his Town Council Colleagues. He is greatly missed in our activities but we shall do all in our power to keep the Station a credit to his memory.

Your notes on state of ground codes was welcome but by coincidence this morning presented a situation which might be added to your advice. This arises when the snow cover is too shallow to measure; the Handbook reference as I read it gives no guidance but the instructions for completing Metform 3208B (Metform 3100A) states that X should be entered in Col. 55. Presumably some sort of 'Trace' entry would also be appropriate in the Pocket Register.

I look forward to receiving further copies of the Newsletter, particularly with its explanations and illustrated refresher hints. After a course at Shinfield in spring it is all too easy to arrive in winter and forget to look at the book for special instructions. We hope that we have not made too many mistakes but have yet to solve the ice bulb problem! Personally I would welcome some sort of short (say long weekend) meeting for relative newcomers where problems found in practice could be discussed and demonstrated. Is anything offered along these lines to supplement the advice we receive by phone and letter?

Yours sincerely

H.J. Ellis
Observer

EDITOR

Some past copies of the Newsletter were sent to Mr Ellis following his above request. The answers to the other queries raised by Mr Ellis are as follows:-

- (i) When a covering of snow is too thin to measure an X, as suggested by Mr Ellis, or TR (short for trace) would be the appropriate entry under column 'U' Total Snow Depth at 0900 GMT in the Pocket Register Metform 3100.
- (ii) Unfortunately the only courses we run for co-operating observers are the ones we advertise each year. Although priority has to be given to new observers, if anyone hasn't been on a course within the last four or five years and feel they would benefit from a refresher course please put in your request when you receive your application forms which are normally sent out in November or December. We'll do our best then to reserve you a place.

September 1986

This was a cold, dry but relatively sunny month. Temperatures were about 2 °C below average and it was been the coldest September over central England since 1952. North Wyke, Devon had the coldest September since records began at the station in 1959. After a cool start to the month, there was rain at times, heavy in places, but with bright intervals. Many places had a number of days with more than 10 hours of sunshine and Morecambe, Lancashire recorded nearly 13 hours on both the 9th and 11th. Air frost was frequent from the 9th. Rain spread northwards during the 13th, reaching North Wales and the north Midlands and giving some fairly high rainfall totals, including 39 mm at Torquay, Devon. On the 15th many places on the south coast had the coldest September day since 1952 with temperatures 8 °C or 9 °C below average. The next few days were fairly sunny and dry; however, the mainly clear weather meant that day temperatures rose a little above average, but the nights remained cold; St Harmon, Powys had a minimum of -5.5 °C on the 19th. Clear skies also led to early morning fog patches and they were particularly slow to clear in southern areas on the 23rd. The rest of the month was mainly dry. The best of the sunshine was in eastern England, and the highest monthly temperature was 25 °C, reached at Newcastle upon Tyne on the 30th. Although a cold month generally, September 1986 had above average sunshine in most areas and was the driest September over England and Wales as a whole since 1971. It was the coldest September in Worthing, West Sussex since records began there in 1880, and in Bournemouth, King's Park, Dorset since 1928.

October 1986

October was generally a rather warm month, although there were some colder days in the second half of the month. It was a windy month, especially towards the end of the month when winds reached storm force in places. After some rain on the 1st most places had dry, warm and sunny weather. On the 4th Herne Bay, Kent had 10.2 hours of sunshine. This was also the warmest day of the month and the highest temperature of 23.4 °C was reached at St Helier, Jersey. Warm settled weather prevailed in southern England until the 8th, although there were early morning fog patches and an isolated shower. A band of rain began to cross all areas on the 9th and cleared south-east England during the evening of the 10th. This was followed by a few mainly dry, warm days, then two dull, wet days. Most of the rain fell in the south-east: a daily fall of 46 mm was recorded at Jubilee Corner, Kent on the 14th. On the 16th and 17th most places were dry and sunny although temperatures remained quite high by day, at night they fell sharply. The lowest temperature during the month dropped below -4 °C at a number of places on about the 16th. On the 18th rain spread to northern England, becoming heavy in places. This gave way to showery conditions. Some of the showers were heavy and accompanied by hail. Thunder was reported in several places. This was the end of the warmer weather, many places becoming rather cold and windy. Gales and torrential rain brought flooding to roads and houses in South Wales on the 20th. On the 24th rain again spread to all areas, with winds reaching storm force on coasts in the west. After a brief mainly dry and sunny interlude on the 26th, dull weather

with rain at times spread once more to all areas and remained unsettled with showers or longer spells of rain. Tynemouth, Tyne and Wear had 150 hours of sunshine during the month, the highest total for 50 years.

November 1986

The month began unsettled as fronts crossed all areas during the 2nd/3rd, followed by further fronts moving into northern England by the morning of the 5th. It was unsettled for the next two weeks, with a series of fronts and depressions crossing or close to the United Kingdom giving wet days on the 13th, 14th and 15th. Hailstones between 10 mm and 20 mm in diameter were reported by Towy Castle, Dyfed on the 14th. The 17th was a showery day with hail and thunder and some heavier rain from an eastward-moving trough of low pressure. On the 18th there was some heavy rain over Wales and south-west England, clearing all but south-east England early on the 19th. On the 20th England and Wales had a wet day as a wave depression crossed central areas; snow fell quite widely in northern England with up to 10 cm in places, but it was short lived. On the 21st a tornado swept through Selsey, West Sussex causing structural damage. Yet another depression on the 23rd brought an associated frontal system that took until the 25th to clear south-east England. During the 26th/27th high pressure developed over the near continent and persisted for the rest of the month, giving England and Wales a settled end to the month. On the 29th fog brought chaos to airports, especially in the south-east, and severe disruption was caused on roads in the south-east and in the Peak District of Derbyshire

December 1986

The unsettled weather continued throughout the whole of December. It was the wettest December in England and Wales since 1979. It was wet everywhere except parts of north Kent, where less than the average rainfall was recorded. Mean monthly temperatures were well above normal, as much as 2 °C above normal in central England. The first four days were mild everywhere: the highest temperature was 15.1 °C, recorded at Chivenor, Devon and Bristol, Avon. On the 7th and 8th heavy rain came to south-west England and South Wales. Camborne and Bastreet, both in Cornwall had 40 mm of rain on the 7th. North-west England and North Wales were rather dull during December, but elsewhere it was sunny at times, especially in East Anglia, with about 140 per cent of normal sunshine. Sunniest day was shared by Bognor Regis, West Sussex and Herne Bay, Kent on the 6th, with 7.5 hours of bright sunshine. On the 14th the pressure at the centre of the Atlantic depression fell to 916 mb, one of the lowest pressures recorded this century. While the depression passed to the north of the British Isles its passage resulted in windy conditions in many parts of the United Kingdom; thus on the 15th Gwennap Head, Cornwall recorded a gust of 77 kn. Winds veered to north-westerly for a few days, bringing wintry showers to parts of the north and west. On the 21st a depression drifted down the North Sea bringing a belt of sleet and snow to the southern counties of England. Although there were wintry showers along the east coast, an anticyclone brought a fairly settled few days to western and northern areas just before Christmas. On the 29th and 30th fronts, slow moving over northern areas brought heavy rain to North Wales: Nantmor, Gwynedd recorded 105 mm in

24 hours. The rain caused flooding and cut off villages, blocked roads and left a trail of damage in northern and western areas of Wales.

January 1987

After a mild start to the month it remained mainly dry with sunny spells, although there were showers of rain, sleet or snow in places. It became very cold in places by the 8th. Most places had some snow showers, but they were frequent and heavy in some eastern areas. On the 11th/12th temperatures fell overnight to record low levels in several places and the following day was exceptionally cold with sub-zero temperatures almost everywhere. On the 12th there were frequent heavy snow showers along the east coast and in Cornwall; level snow cover of 39 cm was reported at Penzance and 30 cm at Falmouth, and conditions were made worse by drifting in the strong easterly winds. Heavy snow in the Sittingbourne area of Kent combined with the strong winds to give drifts of over 6 m. After another cold night with the lowest maximum in the United Kingdom being recorded at Okehampton, Devon, the 13th was comparatively uneventful, with a mainly dry, sunny day in western areas although further heavy snow brought the worst conditions for over 20 years to Kent during the evening and swept across remaining areas during the night. At East Malling, Kent 52 cm of level snow was measured, probably the greatest depth of undrifted snow in the area for at least 40 years. Warmer air pushed eastwards on the 19th and a marked thaw occurred in south-west England; it became very mild in north-western areas. On the 20th the early morning temperature on Jersey, Channel Islands was -6°C . On the 21st fog was fairly widespread throughout England and Wales and on the following day it persisted all day in parts of Kent. The slow rise in temperature continued, however, with all parts rising above freezing point. On the 23rd an anticyclone was centred over Great Britain maintaining settled conditions through to the 26th and 27th. By the 28th most areas were much brighter but cooler with good sunny periods by day and widespread frost at night. This was also the end of a period of sunlessness which varied between 11 and 15 days, creating new records in some places for the greatest number of January days without sun. Cloudier conditions along some eastern coastal areas of England resulted in a few mainly light snow showers. It was the driest January at Hampstead, Greater London since 1914.

February 1987

After a cold start to the month it became cloudy, milder and more unsettled the mild weather spreading eastwards between the 3rd and 6th with some freezing rain in the north-east at first. It became more settled in the north on the 7th and 8th, but southern England and South Wales remained cloudy, with some rain or drizzle at times. Torbay, Devon reporting a maximum of 14.5°C on the 8th. On the 11th most places became cold and dry, apart from some rain in central and south-western England. The 13th was dry nearly everywhere apart from South Wales and south-west England where there was a little rain. A cold period from the 14th to 20th gave some light dustings of snow here and there with moderate or severe frosts at night. Milder weather began to move southwards between the 18th and 20th preceded by a little sleet or snow and spread to all parts on the 26th. The last two days were mild everywhere and 16°C was recorded at London Weather Centre on the 28th making it the warmest

February day in central London since 1961. . The period from the 21st to 24th was dry in most places. Grizedale, Cumbria recorded 65 mm on the 27th and 70 mm on the 28th, 164 mm in all in the last three days, towards a total for the month of 266 mm. Thick fog at sea was the cause of three collisions on the 4th, one off Harwich, Essex and the other two in the English Channel off the coasts of Kent and East Sussex. On the 26th it became very misty with hill and coastal fog which persisted for the rest of the month, especially in the west.

March 1987

The highest temperature of the month, 17.6 °C, was recorded at Loughgall, Co. Armagh on the 1st. Rain at the start of the month gave way to snow on the 3rd followed by colder drier weather in most places and there was further snow between the 6th and 8th. The weather then became drier and colder as south-easterly winds became established across the United Kingdom. At about mid month it again became unsettled and wet weather turned wintry with snow in most areas, on the 19th falling mainly as showers, with snow lying for a time on high ground. Snow falling on the 22nd turned to rain as temperatures rose. There were sunny spells in all areas. Northern areas had drier and more sunny conditions on the 23rd and 24th but it remained cold. Rain or drizzle was heavy on the 23rd in south-west England. It remained unsettled and by the 27th there were gales in all areas especially in southern and south-west England; the Severn Bridge was closed to all traffic for only the second time in 20 years and the Britannia Bridge into Ynys Mon (Anglesey) was closed to high sided vehicles. Oxford reported that the mean wind speed exceeded 30 kn for 12 hours between 07 h and 19 h on the 27th and 40 kn between 11 h and 14 h, with a number of gusts more than 60 kn and the maximum just before noon of 72 kn, at about the time a mature beech tree was completely uprooted in the grounds of Keble College. On the 28th there were thunderstorms in places. Lightning struck a BBC television outside broadcast tower, severely shocking a technician, as rain, hail and strong winds provided a stormy conditions for the University Boat Race on the 28th. The month ended as it had begun, mild and rather cloudy.

April 1987

Most of the month's rainfall fell in the first 10 days of the month, with some record breaking totals, especially in north-east England and around Exeter in Devon. By the 6th holiday resorts in the south-west had had almost twice their average April rainfall. The weather remained unsettled with almost daily rainfall until about the 11th when it became warmer and mainly dry with a fair amount of sunshine; some places in central and southern England had no measurable rainfall over the next 16 days. It was frequently misty and fog often brought offshore visibility down to a few hundred metres. It then became fine and warm on the 24th and remained so until the 27th with a good deal of sunshine in most places except in the north and west. The fine spell was broken by outbreaks of thundery rain on the 29th and local thunderstorms occurred. April was a record breaking month over much of Great Britain, with a sunny, dry and very warm spell: London had its warmest April day for 35 years on the 26th with 23.9 °C, and its warmest April since 1943. On the 17th London and Bristol enjoyed one of the warmest Good Fridays since records began in the 1940s, with 22.6 °C recorded in London and 21.5 °C in Bristol. Highest temperature of the month was 24.7 °C at Liphook, Hampshire on the

24th. Bidston, Merseyside reported its warmest April since records began there in 1867.

May 1987

The month began rather cool and unsettled, windy and showery with hail and thunder, especially in eastern England. The rest of the first week was dry in many areas. Temperatures recovered slowly during the week, rising above normal on the 7th and 8th, with plenty of sunshine. On the 10th there was a bright start to the week, although there were some showers here and there. Unsettled weather spread to most areas on the 11th and 12th, with hail and thunder in some areas, and it was very windy in western areas. It remained unsettled with showers or longer periods of rain on the 14th and 15th and thunder was reported on both days. Persistent rain affected many areas of central and eastern England on the 17th and 18th. The 19th and 20th were almost completely dry days, but on the 22nd and 23rd there were heavy showers in parts of the south-east, prolonged in places. Some heavy rain spread into south-west England in the evening on the 24th, but died out during the next morning. There was patchy drizzle early on the 26th but away from the east coast most places had a sunny and warm day. It remained unsettled for the rest of the month with light rain spreading across all areas from time to time, followed by brighter weather with sunny spells and some showers. On the 29th, cloud and rain spread from the west to give some rain, heavy in places on the 30th and 31st.

June 1987

The first half of June was cool and showery, with many places on the eastern side of the United Kingdom having twice as much rain as could normally be expected. Between the 14th and 20th there was only a little improvement, with the best of the weather being in the north, and between the 21st and 27th there was further deterioration, and for the first time since 1969 there was no play on the first day of the tennis championships at Wimbledon. However, the weather improved during the last few days of the month. From the 11th to 13th thunderstorms were widespread over Wales, the Midlands and south-east England. Intense thundery activity occurred on the 14th; London and the south-east were badly affected by thunderstorms which caused flooding on roads. Seven people were taken to hospital after lightning hit a tree in a park in Stroud, Gloucestershire. On the 16th thunderstorms were again widespread; during a thunderstorm hailstones of 10 mm diameter fell at Towy Castle, Dyfed. Over much of England and Wales the end of the month was unusually warm: Silsoe, Bedfordshire recorded a minimum of 18.0 °C on the 28th, the warmest June night on record at the station, and Ashover, Derbyshire, with 17.9 °C on the 29th, had the warmest June night since records began there in 1967. Worthing, West Sussex reported the fourth wettest June since their records began in 1887, Sheffield, Weston Park reported the greatest consecutive number of days with rain falling in June since 1935, Silsoe, Bedfordshire the wettest June since 1958 and the observer at Coventry (Bablake) says that the 18th was the wettest June day since 1958.

July 1987

Most of England and Wales was dry throughout the first half of the month with no measurable rain reported in many areas south of a line from South Wales to the Wash up to the 13th. There was prolonged sunshine on many days with temperatures in some areas reaching 25 °C to 30 °C at times. By the 13th and 14th outbreaks of rain, heavy in places and with isolated thunderstorms, had spread from the south-west into Wales and southern England. On the 16th the rain was persistent and, in eastern areas of England, heavy at times. On the 17th Slapton, Devon recorded 88 mm of rain in 5 hours. On the 18th heavy rain caused extensive flooding and some damage to roads and structures in East Sussex and parts of Kent, and Bidston reported widespread flooding on many roads in Merseyside; heavy falls included 57 mm at Little Butser, Hampshire. While most places had heavy showers or longer spells of rain on the 19th and 20th with thunder in places on both days, western England and Wales was mainly dry with sunny spells. Later, western areas, and in particular north-west England, had by far the warmest and sunniest weather, while some places along the east coast did not see the sun again before the 24th. Hill and coastal fog affected western areas on the 29th; many parts of England and Wales had some rain, heavy in north-west England at first. It became brighter but in eastern and south-eastern England thunderstorms developed, giving heavy rain and hail in places with local flooding. In parts of Cornwall the 22nd to 29th was mostly dry, and the Isles of Scilly had 12 consecutive dry days.

August 1987

For the first 10 days of the month it was rather cool everywhere with frost on one or two nights in Welsh valleys and Scottish glens, followed by a very warm period during the middle of the month and then ended cool in the east but warm in the west. On the 6th there were reports of waterspouts off Yarmouth, Isle of Wight, one to over 600 m. On the 9th thunderstorms in South and West Yorkshire caused flooding, disrupting traffic. On the 16th the temperature in London reached 28 °C with a fine hot day over much of southern England, while some northern parts had heavy rain. There were widespread reports from as far apart as the Isle of Wight and north-west England of desert sand being deposited in precipitation during the night of the 16th/17th. On the 18th southern counties of England had their hottest August night since 1980, with temperatures averaging more than 21 °C in parts of Sussex, Kent and Hampshire. Over England and Wales during the weekend 21st and 22nd, widespread and at times violent thunderstorms gave very heavy rain in many places, causing floods in some parts of eastern and northern England and the Midlands. On the 22nd the area from Chelmsford to Ipswich had one of its worst storms in living memory. Flooding was caused by torrential rain accompanied by hailstones as big as golf balls that smashed windows and windscreens, causing havoc and creating a wintry landscape as they lay up to 30 cm deep in places. A cricketer at Isleworth, Greater London was killed by lightning and nine other players were injured during a match on the 22nd. East Anglia had the wettest August for over 30 years, while south-west England had the driest August since 1981. North Wyke, Devon reported the driest August since records began there in 1959. Heavy falls included 83 mm at Birmingham Airport, West Midlands on the 22nd.